



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/820,671 | 03/30/2001 | Eiji Yanagawa | 1248-0538P | 4277 |

2292 7590 12/31/2002

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

CLARK, SHEILA V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2815

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/820,671

Applicant(s)
Yangawa et al

Examiner
Sheila V. Clark

Art Unit
2815



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8-29-2002, 9-11-2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 4-22 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-20 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7-9, and 22 is/are rejected.
- 7) ☒ Claim(s) 6 and 21 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 6) ☐ Other:

Art Unit: 2815

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Cancelled
Claim 1, 2, ~~3~~, 4-6, 7-9, 22 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The claim 1 and ~~21~~²² specifically recite that invention only operates normally when the semiconductor chip is in a level position the claim goes on to recite that the chip deforms and is also detached from the board and. All claims independent claims recite a detachment feature. A chip is typically attached to a printed circuit board which contains various electrical interconnects that provide current, voltage and other power features to the chip allowing it to operate. A deformation of the chip and detachment of said chip from this board could provide a host of electrical problems such as power disconnect and short circuit to name a few and therefore rendering the chip inoperable. There is also nothing in these claims relative to an invention that has utility. There claims basically claims an environment and series of events that be found in said environment. Further a deformation of the chip would render a deformation of the transistors.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Serial No: 09/820, 671

Art Unit: 2815

Claims 1-2, 3, 5, 7, 8, 9, 22 insofar as definite are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 19 and the Admitted Prior Art in the disclosure of pages 5-6.

A semiconductor element 102 is disclosed on page 5, last paragraph as being secured level onto board 103. Said device is taught to operate normally when packaged on the board. Page 6 discloses that the chip may be peeled or detached from the board.
Said device is shown to be of a flip chip type.

Claims 1-2, 4, 5, 7, 8, 9, 22 are rejected.

W/d * Claims 6, 21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action including all of the limitations of the base claim and any intervening claims in conjunction with claims language to be suggested by the Examiner.

Claims 10-20 are considered allowable over the prior art of record.

Applicant's arguments filed 9-11-2002 have been fully considered but they are not persuasive. Applicant attempts to claim features that have utility and also render the device inoperable. Applicant's invention as relayed in the disclosure of the instant invention appears to hinge on a detecting/sensing feature that applicant attempts to recite broadly in only a few claims.

Kurosawa et al, Tower et al, Doolittle, Nishigushi and Adams et al are cited packages having detector means.

Serial No: 09/653, 820


Art Unit : 2815

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner S.V. Clark whose telephone number is (703) 308-4924.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee , can be reached on (703) 308-1690. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

December 27, 2002


SHEILA V. CLARK
PRIMARY EXAMINER